



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/732,859

DATE: 08/27/2004

TIME: 14:29:10

Input Set : N:\Crf3\RULE60\10732859.raw

Output Set: N:\CRF4\08272004\J732859.raw

1 <110> APPLICANT: J. Turck
 2 J. Archer
 3 <120> TITLE OF INVENTION: CONTROL OF GENE EXPRESSION IN EUKARYOTES
 4 <130> FILE REFERENCE: 9341-021
 5 <140> CURRENT APPLICATION NUMBER: US/10/732,859
 6 <141> CURRENT FILING DATE: 2003-12-09
 7 <150> PRIOR APPLICATION NUMBER: US/09/469,211
 8 <151> PRIOR FILING DATE: 1999-12-22
 9 <150> PRIOR APPLICATION NUMBER: UK 9828660.2
 10 <151> PRIOR FILING DATE: 1998-12-24
 11 <160> NUMBER OF SEQ ID NOS: 19
 12 <170> SOFTWARE: PatentIn Ver. 2.1
 14 <210> SEQ ID NO: 1
 15 <211> LENGTH: 7600
 16 <212> TYPE: DNA
 17 <213> ORGANISM: Rhodococcus sp.
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 19 <221> NAME/KEY: CDS
 20 <222> LOCATION: (295)..(1035)
 21 <223> OTHER INFORMATION: ohpR regulator
 22 <221> NAME/KEY: CDS
 23 <222> LOCATION: (1261)..(2805)
 24 <223> OTHER INFORMATION: ohpA transport

W--> 25 <221> CDS
 26 <222> LOCATION: (2807)..(4720)
 27 <223> OTHER INFORMATION: ohpB monooxygenase
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 29 <222> LOCATION: (5721)..(6665)
 30 <223> OTHER INFORMATION: ohpD catechol 2,3-dioxygenase
 W--> 31 <400> 1

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34  cgттаaccсc gaggttgгcc acgatgcccc ggccatcagg tctggaatgc tagcgttcca 180
35  gacgaaggta acccacagtг actcacacca caagtactag aatgcaagct gttgcggtga 240
36  gcgcgcgcggc атаaggggga gccatgtccg ggacgccgac ggaaagcctg actcg 295
37  atg acc acc acc gac acc ggc ccc aag ccg ggc agt gag gcc gcc gcc 343
38  Met Thr Thr Thr Asp Thr Gly Pro Lys Pro Gly Ser Glu Ala Ala Ala
39  1 5 10 15
40  ctg ctc gcc aat gtc cgc acc tcg ggg gcg cgg ctg tcc tcc gcg ttg 391
41  Leu Leu Ala Asn Val Arg Thr Ser Gly Ala Arg Leu Ser Ser Ala Leu
42  20 25 30
43  tac gac att ctg aag aac cgg ctg ctc gaa ggg cgc tat gcg gca ggc 439
44  Tyr Asp Ile Leu Lys Asn Arg Leu Leu Glu Gly Arg Tyr Ala Ala Gly
  
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45          35          40          45
46 gag aag atc gtc gtc gag tcg atc cgg caa gag ttc ggg gtg agc aag 487
47 Glu Lys Ile Val Val Glu Ser Ile Arg Gln Glu Phe Gly Val Ser Lys
48          50          55          60
49 cag ccc gtc atg gac gct ctg cgc cgc ctg tcc agc gac aag ctg gtc 535
50 Gln Pro Val Met Asp Ala Leu Arg Arg Leu Ser Ser Asp Lys Leu Val
51          65          70          75          80
52 cac atc gtt ccc cag gtc ggt tgc gag gtc gtc tcc tac gcc ccg cgc 583
53 His Ile Val Pro Gln Val Gly Cys Glu Val Val Ser Tyr Ala Pro Arg
54          85          90          95
55 gaa gtg gaa gac ttc tac acc ctg ttc ggc ggt ttc gaa ggg acc atc 631
56 Glu Val Glu Asp Phe Tyr Thr Leu Phe Gly Gly Phe Glu Gly Thr Ile
57          100          105          110
58 gcc gcg gta gcg gcc tcc cgg cgg acc gag gcc cag ttg ctg gag ctg 679
59 Ala Ala Val Ala Ala Ser Arg Arg Thr Glu Ala Gln Leu Leu Glu Leu
60          115          120          125
61 gac ctg atc tcg gcg cgg gtc gac gcc ctg atc acc tcc cac gac ccg 727
62 Asp Leu Ile Ser Ala Arg Val Asp Ala Leu Ile Thr Ser His Asp Pro
63          130          135          140
64 gtg gtc cgc gcc cgc ggg tac cgc gtg cac aac cgg gag ttc cat gcg 775
65 Val Val Arg Ala Arg Gly Tyr Arg Val His Asn Arg Glu Phe His Ala
66          145          150          155          160
67 gcc atc cac gcg atg gcg cac tcg cgg atc atg gag gag acc agc cag 823
68 Ala Ile His Ala Met Ala His Ser Arg Ile Met Glu Glu Thr Ser Gln
69          165          170          175
70 cga atg tgg gat ctg tcg gac ttc ttg atc aac acc acc ggc atc acc 871
71 Arg Met Trp Asp Leu Ser Asp Phe Leu Ile Asn Thr Thr Gly Ile Thr
72          180          185          190
73 aac ccg ctc tcg agc gca ctg ccc gac cgg cag cat gac cac cac gaa 919
74 Asn Pro Leu Ser Ser Ala Leu Pro Asp Arg Gln His Asp His His Glu
75          195          200          205
76 atc acc gag gcc atc cgc aac cgt gac gca gct gcc gcc cgc gag gcc 967
77 Ile Thr Glu Ala Ile Arg Asn Arg Asp Ala Ala Ala Arg Glu Ala
78          210          215          220
79 atg gaa cgc cac atc gtc ggc acc atc gca gta atc cgc gac gaa tcc 1015
80 Met Glu Arg His Ile Val Gly Thr Ile Ala Val Ile Arg Asp Glu Ser
81          225          230          235          240
82 aac gcc cag ctg ccg agc tag accccgatac ccggggccatc gaccggctcc 1066
83 Asn Ala Gln Leu Pro Ser
84          245
85 gctatcgcgc cacctacgcc gaggggggac tctcggccgt agcgtgcag acgatccacc 1126
86 ggcaccctcc acgctgaccc ctgtctcgcc ctagagggcc ggcgcgccgt cgatcacctt 1186
87 taccctcacc cagagacttg cgtcaccctc tatgcccgag tagcgtctga actagacgtc 1246
88 tagcattcta gttga          gtg ctc cct ctc gaa gat tct cca gag 1288
89          Val Leu Pro Leu Glu Asp Ser Pro Glu
90          250          255
91 aac ccc tct cga aca tcc cca gaa gaa agg agc ggc cat gac gac cgc 1336
92 Asn Pro Ser Arg Thr Ser Pro Glu Glu Arg Ser Gly His Asp Asp Arg
93          260          265          270

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94	ttc gca cgc atc gtc ctt cgg ggc acg agc cca ctt ccg ccc aca gat	1384
95	Phe Ala Arg Ile Val Leu Arg Gly Thr Ser Pro Leu Pro Pro Thr Asp	
96	275 280 285	
97	cgg gga agc ccg acc gtg agc acc aca cct acc tcc ccg acg aag acc	1432
98	Arg Gly Ser Pro Thr Val Ser Thr Thr Pro Thr Ser Pro Thr Lys Thr	
99	290 295 300	
100	tca ccg ctg cgg gta gcg atg gcc agc ttc atc ggt acc acc gtc gag	1480
101	Ser Pro Leu Arg Val Ala Met Ala Ser Phe Ile Gly Thr Thr Val Glu	
102	305 310 315	
103	tac tac gac ttc ttc atc tac ggc acc gcg gcc gcg ctg gta ttc cct	1528
104	Tyr Tyr Asp Phe Phe Ile Tyr Gly Thr Ala Ala Ala Leu Val Phe Pro	
105	320 325 330 335	
106	gag ttg ttc ttc ccg gat gtc tcg tcc gcg atc gga atc ctg ttg tcg	1576
107	Glu Leu Phe Phe Pro Asp Val Ser Ser Ala Ile Gly Ile Leu Leu Ser	
108	340 345 350	
109	ttc gcg acc ttc agc gtt ggg ttc ctc gcc cgc ccg ctg ggt ggc ata	1624
110	Phe Ala Thr Phe Ser Val Gly Phe Leu Ala Arg Pro Leu Gly Gly Ile	
111	355 360 365	
112	gtg ttc ggg cac ttc ggt gac cgg gtc ggc cgc aag cag atg ctg gtg	1672
113	Val Phe Gly His Phe Gly Asp Arg Val Gly Arg Lys Gln Met Leu Val	
114	370 375 380	
115	atc tcc ctg gtc gga atg ggc tcg gcc acc gta ctg atg gga ttg ttg	1720
116	Ile Ser Leu Val Gly Met Gly Ser Ala Thr Val Leu Met Gly Leu Leu	
117	385 390 395	
118	ccc ggt tac gcc caa atc ggg atc gcc gcc ccc atc ctg ctg acc ctg	1768
119	Pro Gly Tyr Ala Gln Ile Gly Ile Ala Ala Pro Ile Leu Leu Thr Leu	
120	400 405 410 415	
121	ctg cgc ctg gtg cag ggc ttt gcc gtc ggc ggc gag tgg ggt gga gcc	1816
122	Leu Arg Leu Val Gln Gly Phe Ala Val Gly Gly Glu Trp Gly Gly Ala	
123	420 425 430	
124	acc ctg atg gcc gtc gag cac gcc ccc acc gcg aag aag ggc ttt ttc	1864
125	Thr Leu Met Ala Val Glu His Ala Pro Thr Ala Lys Lys Gly Phe Phe	
126	435 440 445	
127	gga tcc ttc tcc cag atg ggg gca ccc gcc ggg acc agc gtc gca acc	1912
128	Gly Ser Phe Ser Gln Met Gly Ala Pro Ala Gly Thr Ser Val Ala Thr	
129	450 455 460	
130	ctg gcg ttc ttc gcg gtc tcc caa ttg ccc gac gag cag ttc ctg agt	1960
131	Leu Ala Phe Phe Ala Val Ser Gln Leu Pro Asp Glu Gln Phe Leu Ser	
132	465 470 475	
133	tgg ggc tgg cga ctg ccg ttc ctg ttc agc gcg gtg ctg atc gtg atc	2008
134	Trp Gly Trp Arg Leu Pro Phe Leu Phe Ser Ala Val Leu Ile Val Ile	
135	480 485 490 495	
136	ggg ctg ttc att cgc ctg tcc ctg gcc gaa agc ccc gac ttc gcc gag	2056
137	Gly Leu Phe Ile Arg Leu Ser Leu Ala Glu Ser Pro Asp Phe Ala Glu	
138	500 505 510	
139	gtg aag gca cag agc gcc gtg gtg cga atg ccg atc gcc gaa gcg ttc	2104
140	Val Lys Ala Gln Ser Ala Val Val Arg Met Pro Ile Ala Glu Ala Phe	
141	515 520 525	
142	cgc aag cac tgg aag gaa att ctc ctc atc gcg ggc acc tac ctg tcc	2152

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143	Arg	Lys	His	Trp	Lys	Glu	Ile	Leu	Leu	Ile	Ala	Gly	Thr	Tyr	Leu	Ser	
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146	Gln	Gly	Val	Phe	Ala	Tyr	Ile	Cys	Met	Ala	Tyr	Leu	Val	Ser	Tyr	Gly	
147			545				550					555					
148	acc	acc	gtc	gcg	ggg	atc	agc	cgc	acc	ttc	gcc	ctg	gcc	gga	gta	ttc	2248
149	Thr	Thr	Val	Ala	Gly	Ile	Ser	Arg	Thr	Phe	Ala	Leu	Ala	Gly	Val	Phe	
150			560			565					570					575	
151	gtc	gcc	ggc	atc	gtc	gcc	gtc	ctc	ctc	tac	ctc	gtg	ttc	ggc	gct	ctg	2296
152	Val	Ala	Gly	Ile	Val	Ala	Val	Leu	Leu	Tyr	Leu	Val	Phe	Gly	Ala	Leu	
153					580					585					590		
154	tcc	gac	act	ttc	ggc	cgc	aag	acc	atg	tac	ctg	ctc	ggc	gcc	gcc	gcg	2344
155	Ser	Asp	Thr	Phe	Gly	Arg	Lys	Thr	Met	Tyr	Leu	Leu	Gly	Ala	Ala	Ala	
156				595				600					605				
157	atg	ggt	gtg	gtg	atc	gcc	ccc	gcc	ttc	gca	ctg	atc	aac	acc	ggc	aac	2392
158	Met	Gly	Val	Val	Ile	Ala	Pro	Ala	Phe	Ala	Leu	Ile	Asn	Thr	Gly	Asn	
159			610				615						620				
160	ccg	tgg	ctg	ttc	atg	gcc	gcg	cag	gtg	ctg	gtc	ttc	gga	att	gca	atg	2440
161	Pro	Trp	Leu	Phe	Met	Ala	Ala	Gln	Val	Leu	Val	Phe	Gly	Ile	Ala	Met	
162			625				630					635					
163	gcc	ccc	gcc	gcc	ggc	gtg	aca	ggc	tcc	ctg	ttc	acg	atg	gtc	ttc	gac	2488
164	Ala	Pro	Ala	Ala	Gly	Val	Thr	Gly	Ser	Leu	Phe	Thr	Met	Val	Phe	Asp	
165			640			645				650						655	
166	gcg	gac	gtg	cgc	tac	agc	ggt	gtc	tct	atc	ggc	tac	acc	atc	tcc	cag	2536
167	Ala	Asp	Val	Arg	Tyr	Ser	Gly	Val	Ser	Ile	Gly	Tyr	Thr	Ile	Ser	Gln	
168				660						665						670	
169	gtc	gcc	ggc	tcc	gcg	ttc	gcc	ccg	acg	atc	gcg	acc	gcc	ttg	tac	gcc	2584
170	Val	Ala	Gly	Ser	Ala	Phe	Ala	Pro	Thr	Ile	Ala	Thr	Ala	Leu	Tyr	Ala	
171				675				680						685			
172	tcc	acc	aac	acc	agc	aac	tcg	atc	gtg	acc	tac	ctg	ctg	atc	gtc	tcg	2632
173	Ser	Thr	Asn	Thr	Ser	Asn	Ser	Ile	Val	Thr	Tyr	Leu	Leu	Ile	Val	Ser	
174			690				695						700				
175	gcc	atc	tcg	atc	gtc	tcg	gtg	atc	ctg	ctg	ccc	ggc	ggc	tgg	ggg	cgc	2680
176	Ala	Ile	Ser	Ile	Val	Ser	Val	Ile	Leu	Leu	Pro	Gly	Gly	Trp	Gly	Arg	
177			705				710					715					
178	aag	ggc	gct	gcg	agc	cag	ctc	act	cgc	gac	cag	gcc	acc	tcc	aca	ccg	2728
179	Lys	Gly	Ala	Ala	Ser	Gln	Leu	Thr	Arg	Asp	Gln	Ala	Thr	Ser	Thr	Pro	
180			720			725				730						735	
181	aaa	atg	cct	gac	acc	gaa	aca	ttt	tcg	act	cgg	aca	gtt	ccg	gac	acc	2776
182	Lys	Met	Pro	Asp	Thr	Glu	Thr	Phe	Ser	Thr	Arg	Thr	Val	Pro	Asp	Thr	
183				740						745						750	
184	gca	gca	tcc	ctg	cgc	gtc	ctc	gac	aag	tga	a	gtg	atg	aca	gac	atg	2825
185	Ala	Ala	Ser	Leu	Arg	Val	Leu	Asp	Lys			Val	Met	Thr	Asp	Met	Ser
186				755					760							765	
187	gac	cac	gac	cgc	acc	tcc	tac	gac	acc	gac	gtc	gtg	atc	gtc	ggc	ctc	2873
188	Asp	His	Asp	Arg	Thr	Ser	Tyr	Asp	Thr	Asp	Val	Val	Ile	Val	Gly	Leu	
189				770					775					780			
190	ggc	ccc	gcc	ggt	ggc	aca	gcg	gcg	ctt	gcc	ctg	gcc	agc	tac	ggc	atc	2921
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195	800						805					810							
196	gcg	cac	atc	acc	aac	cag	cgc	gcc	gtc	gaa	gtg	ctg	cgt	gac	ctg	ggc		3017	
197	Ala	His	Ile	Thr	Asn	Gln	Arg	Ala	Val	Glu	Val	Leu	Arg	Asp	Leu	Gly			
198	815					820					825					830			
199	gtc	gaa	gac	gag	gcg	cgc	aac	tac	gcc	acc	ccg	tgg	gac	cag	atg	ggc		3065	
200	Val	Glu	Asp	Glu	Ala	Arg	Asn	Tyr	Ala	Thr	Pro	Trp	Asp	Gln	Met	Gly			
201					835					840						845			
202	gac	acg	ctg	ttc	acc	acg	agc	ctg	gcc	ggc	gag	gag	atc	gtc	cgg	atg		3113	
203	Asp	Thr	Leu	Phe	Thr	Thr	Ser	Leu	Ala	Gly	Glu	Glu	Ile	Val	Arg	Met			
204				850					855						860				
205	cag	acc	tgg	ggc	acg	ggc	gat	atc	cgc	tac	ggg	gac	tac	ctg	tcc	gga		3161	
206	Gln	Thr	Trp	Gly	Thr	Gly	Asp	Ile	Arg	Tyr	Gly	Asp	Tyr	Leu	Ser	Gly			
207	865						870					875							
208	agc	ccc	tgc	acg	atg	ctc	gac	att	ccg	cag	ccc	ctg	atg	gag	ccg	gtg		3209	
209	Ser	Pro	Cys	Thr	Met	Leu	Asp	Ile	Pro	Gln	Pro	Leu	Met	Glu	Pro	Val			
210	880						885					890							
211	ctg	atc	aag	aac	gcc	gcc	gaa	cgt	ggc	gcg	gtc	atc	agc	ttc	aac	acc		3257	
212	Leu	Ile	Lys	Asn	Ala	Ala	Glu	Arg	Gly	Ala	Val	Ile	Ser	Phe	Asn	Thr			
213	895				900					905					910				
214	gaa	tac	ctc	gac	cac	gcc	cag	gac	gag	gac	ggg	gtg	acc	gtc	cgg	ttc		3305	
215	Glu	Tyr	Leu	Asp	His	Ala	Gln	Asp	Glu	Asp	Gly	Val	Thr	Val	Arg	Phe			
216				915						920					925				
217	cgc	gac	gtc	cgc	tcg	ggc	acc	gtg	ttc	acc	cag	cga	gcc	cgc	ttc	ctg		3353	
218	Arg	Asp	Val	Arg	Ser	Gly	Thr	Val	Phe	Thr	Gln	Arg	Ala	Arg	Phe	Leu			
219				930					935					940					
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221	Leu	Gly	Phe	Asp	Gly	Ala	Arg	Ser	Lys	Ile	Ala	Glu	Gln	Ile	Gly	Leu			
222		945					950					955							
223	ccg	ttc	gaa	ggc	gaa	ctc	gcc	cgc	gcc	ggc	acc	gcg	tac	atc	ctg	ttc		3449	
224	Pro	Phe	Glu	Gly	Glu	Leu	Ala	Arg	Ala	Gly	Thr	Ala	Tyr	Ile	Leu	Phe			
225	960						965					970							
226	aac	gcg	gac	ctg	agc	aaa	tat	gtc	gct	cat	cgg	ccg	agc	atc	ttg	cac		3497	

VERIFICATION SUMMARY

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Input Set : N:\Crf3\RULE60\10732859.raw

Output Set: N:\CRF4\08272004\J732859.raw

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L:28 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1
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L:689 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (7) SEQUENCE: